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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,767

02/28/2005

Franz-Josef Dietzen

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10/02/2008

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EXAMINER

ZEMEL, IRINA SOPHIA

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/525,767	<b>Applicant(s)</b> DIETZEN ET AL.	
	<b>Examiner</b> Irina S. Zemel	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6-20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-20 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

It is noted that some of the pending claims still depend on the cancelled claim 2 and now cancelled claim 5.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-4,6, 9-17 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patents 4,990,542 and 5,317,033 (of record) both to Monani, et al., (hereinafter "Motani '542" and Motani "'033") in combination with either US Patent 4,818,451 to Arai et al., (hereinafter "Arai"), or US Patent 4,912,140 to Tusim, (hereinafter "Tusim"), and further in combination with EP 0915127 to BASf or WO 98/51735 to BASf both of record, (hereinafter "BASF EP" and "BASF WO").

The rejection stands as per reasons of record (as previously applied to claim 5 and 22).

Claims 7-8 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motani '033 or Motani '542 in combination with Arai or Tusim and with BASF EP or BASF WO as applied to claims 1-3 above and further in view of US Patent 4,585,825 to Wesselmann, (hereinafter "Wessemann").

#### ***Response to Arguments***

Art Unit: 1796

Applicant's arguments filed 6-26-2008 have been fully considered but they are not persuasive. The applicants main argument is that the process of Motani is directed to production of extruded foamed boards, while the claimed process is directed to the bead foaming process. The examiner agrees that the process disclosed in Motani is directed to the extrusion of foamed boards, not producing foam beads, but the rejection as set forth above (and the previous office action) is not over Motani or anyone of the cited references alone. It is specifically noted by the examiner, that **the only** difference between the claimed process and the most commonly known process of making expandable foam beads is that the instant process utilized specifically claimed blowing agent (water) in combination with a solubilizer (and an absorbent as per dependent claims). All other claimed steps are nothing more than the most common steps use in producing expandable PS beads (as noted above). This is a well known process as evident, for example, from the cited reference Arai, column 4, lines 56 et seq. The processes of making foamed PS based articles of various size, shape or utility is also well known in the art. Moreover, the applicants themselves provide an Encyclopedia type document that supports this position, i.e., that it is well known in the art what properties are exhibited by extruded foams and what properties are exhibited by the expandable particles, for which applications an ordinary artisan uses one and for which another. Thus, the combined teachings of the cited references (not anyone reference alone) makes the claimed process obvious by either changing the shape of articles of Motani (making beads that can be further expanded, which exhibit properties characteristic of the expandable beads for applications where such properties are

Art Unit: 1796

desired and still maintaining all of the advantages that are obtained by using the blowing agents of Motani), or by using such blowing agents combinations (alcohol, water and absorbent) of Motani (leading to improved properties as discussed in the previous office action) in processes of BASF, that are already directed to the production of expandable beads. It is expressly noted that the applicants **did not** even discuss the alternative rejection set forth in the previous office action (pages 4-5) proposing modification of BASF references to utilize the blowing agent compositions of Motani.

As discussed in the previous office action, Motani expressly discloses addition of water, aliphatic alcohol (and absorbing agent) in addition to the blowing agent, all in the amounts corresponding to the claimed amounts. (See previous office action and illustrative examples of Motani).

The applicants further argue that the Motani reference utilizes water as a cell controlling agent for the foam sheet. The applicants argue that water is combined with particles such as talc, calcium carbonate and silica which actually absorb the water creating the cell size control agent. The use of a water/particulate mixture as a cell control agent is quite distinct from using water and a solubilizer as a blowing agent. This argument is not convincing for at least the following reasons. First of all, it is irrelevant what a component is called or named (in the claims or references), as long as it is the same components utilized in the same compositions and similar processes. Second, even if it is absorbed by another particulate component, water will expand to some degree at the processing temperatures, thus acts as blowing agent. Third, it is noted that applicants themselves add water absorbent agents to their compositions

Art Unit: 1796

(zeolites etc.,) which will also absorb, or bind water. Thus, it appears that the water function would be the same or similar in either the process claimed by the applicants, or disclosed by Motani (which, again, is not relevant to the patentability of the claims so long as the same components are used in the same amounts).

The applicants argument with respect to the disclosure of Wesselmann reference not relating to thermoplastic foams is also not convincing. The reference discloses how the properties of polystyrene (the same underlying polymer used in ALL of the other cited references used in rejections) vary with molecular weight variations, which are expected to be similar whether the polymers are foamed or not

Thus, the rejections of claims is maintained as per reasons of record.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 1796

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/  
Primary Examiner, Art Unit 1796

Irina S. Zemel  
Primary Examiner  
Art Unit 1796

ISZ